

Amendments to the Drawings

The attached sheet of drawings includes changes to Figure 4. This sheet, which includes Figures 3 and 4, replaces the original sheet including Figures 3 and 4.

Attachment: Replacement Sheet.

REMARKS

Receipt of the Office Action mailed November 2, 2006 is acknowledged. Claims 19-22 have been amended to further clarify what applicants regard as the invention. Support for the amendment to the claims can be found throughout the specification. Claim 23 has been canceled without prejudice or disclaimer. Support to the specification can be found throughout the original specification, for example, Figure 4. Upon entry of the amendment, claims 18-22 will be pending in the application.

Objection to the Drawings

Applicants enclose herewith a replacement sheet showing a reference numeral to the aspirating probe in Figure 4. In view of the amended Figure 4 applicants respectfully request withdrawal of the objection.

Amendment to the Specification

The specification has been amended to provide a description of the reference numeral added to Figure 4.

35 USC Section 102(b) Rejection

Claims 20-22 stand rejected under 35 U.S.C. section 102(b) as being anticipated by Byrd (U.S. Patent No. 1,547,562). Reconsideration and withdrawal of the rejection are respectfully requested.

As pointed out in previous replies, Byrd's mechanism of mixing is completely different and much less effective than the mixing accomplished by the claimed probe tip having diameters sufficiently unequal between the middle compartment and the end compartments to cause rotational mixing of liquids as they move past the transition zone wall formed between adjacent compartments. In Byrd, blood is

aspirated in a relatively uncontrolled fashion (mouth pipetting) up to graduation line 12 as shown in Figure 1. Next, the pipette tip is immersed in a diluent such as distilled water and aspirated (by mouth) to graduation line 13. See, e.g., Figure 1 and page 2, lines 16-20. Byrd further describes an elastic band 14 stretched over the pipette in such a manner that the two open ends of the pipette are closed off. See Figure 3. The pipette is then grasped between the thumb and forefinger and shaken so that **cube 11 provides mechanical mixing by moving through the diluent and blood contained in chamber 9**. See Figure 2 and page 2, lines 20-27. In view of the fact that there is no free fluid surface in chamber 7, mixing will be quite ineffective (i.e., there is no space for the fluid to “slosh about” in chamber 7 as it is shaken). The final step in the process consists of expelling the contents of the pipette into a test tube for analysis.

The claimed invention accomplishes mixing by a very different mechanism. The claimed tip design induces a tendency of fluid to “swirl” as it transitions from small to large diameter transitions between the compartments. The fluid “particles” then follow a different path as the bulk fluid motion is reversed which provides for fluid mixing. The claimed diameter geometry is required to achieve this effect. All claimed compartments are an important part of the mixing process. In contrast, it is only the largest chamber 9 that is important to mixing in Byrd.

If the mixing provided by the claimed probe tip were attempted in the pipette of Byrd, cube 11 would sink to the bottom of chamber 9 and partially occlude the transition into area 8. Therefore, in addition to not having the correct geometry to provide mixing between areas, the cube 11 would interfere with mixing. As noted above, the mixing in Byrd occurs solely in chamber 9, not between compartments having different diameters as claimed. To that end, applicants have amended the claims to recite the claim transitional phrase “consisting essentially of” which excludes materials or steps that materially affect the basic and novel characteristics of the invention. See MPEP 2111.03. Incorporating the mixing cube of Byrd into the claimed invention, would interfere with the mixing mechanism provided by the claimed invention. Accordingly, since the claimed invention now excludes the cube

11 of Byrd, applicants submit that Byrd fails to teach or suggest the claimed invention. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

35 USC Section 103 Rejection

In view of the foregoing amendments and remarks, applicants submit that the secondary references of Zabetakis and Elkins fail to teach or suggest the shortcomings of Byrd. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

The examination of these claims and passage to allowance are respectfully requested. An early Notice of Allowance is therefore earnestly solicited. Applicants invite the Examiner to contact the undersigned at (732) 524-1496 to clarify any unresolved issues raised by this response.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Account No. 10-0750/CDS0255/TJB. This sheet is submitted in triplicate.

Respectfully submitted,

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